

### DETAILED ACTION

1. Applicant's submission filed on 6/18/2010 will be entered and considered. Furthermore, the finality of the rejection of March 31, 2010 is withdrawn and a new office action which discussed herewith, which includes the limitations of the amendment added after final on 6/18/2010. New rejections are presented for amended claims 27 and 28 herein.

#### *Claim Rejections - 35 USC § 102*

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. **Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by Czetli (US 3,587,132).**
4. Czetli ('132) discloses a molding apparatus for forming an article, wherein invention has wide application in the field of forming articles out of material subjected successively to different temperatures (See col.1 lines 10-12). The reference teaches the formation of cups from **foamed polystyrene** (See col.1 lines 14-16), such foamed polystyrene (or Styrofoam) is well known consumable material, since it is generally used and disposed. It further teaches that the invention comprises **a female mold (22)** having a molding cavity (18) for receiving molding material; **a male mold (28)** as a ram is associated with drive means (8) is involved to move male mold(28) in selective position such as into and out of the mold (26) (See figure 2), wherein male mold comprises a **passage (47)** is associated with cooling water chamber (43) for supplying water within the internal space of the male mold (See figure 9; col.5 lines 25-28), thus, such configuration of the male die would **define a water cooled ram** as cited in claim; and further comprises **axial bore (46) for receiving tube (33)**, wherein tube having one end as **duct (34) communicate with the cavity** (See col.4 lines 33-35; figure 9), and other end as **supply source** (not labeled) (See figure 9), wherein tube is involved to flow the steam into the cavity (See col.5 lines 18-22). For examination purpose the examiner is

considering the open and closed positions of the mold as first and second position of the ram as cited in claim. It further teaches that after predetermined time the steam admitted through the tube is shut off (See col.5 lines 23-24), wherein such statement indicates that the tube (33) is associated with any suitable source by valve for shutting off and opening communication of steam. Claim 26 of the instant application cites structural limitations with the intended uses as further limitations of the subject matter, such as, “...**gas from the source communicates through the tube and into the mold for displacing an amount of consumable material, wherein the water cooled ram is in the second position**”. Intended use has been continuously held not to be germane to determining the patentability of the apparatus, *In re Finsterwalder*, 168 USPQ 530. The manner or method in which a machine is to be utilized is not germane to the issue of patentability of the machine itself, *In re Casey*, 152 USPQ 235, 238. Purpose to which apparatus is to be put and expression relating apparatus to contents thereof during the intended operation are not significant in determining patentability of an apparatus claim, *Ex parte Thibault*, 164 USPQ 666. A recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations, *Ex parte Masham*, 2 USPQ2d 1647. **Czetli ('132)** discloses all claimed limitations as discussed above, and, thus claim is anticipated.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. **Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Binley (US 5,409,722) in view of Vos (US 5,102,672).**

8. **Binley ('722)** discloses an invention related to manufacture consumable product, such as chocolate, particularly in shell form, wherein invention comprises two separable mould surfaces, which defines a closed cavity as a mould containing consumable product, such as solid fat containing product, especially **chocolate product** (See col.2 lines 1-5). It further teaches that the invention comprises **a ram (2)** which is held **at cooled temperatures in association with cooling device** (See examples 1-2). It further teaches that the cooling ram (2) having **an axial bore (8)** (See figure 1). It further teaches that the ram (2) is configured to selectively move into and out of the mold in order to form shell of the consumable product (See figures 1-2). For examination purpose examiner is considering the open and closed positions of the mold as first and second position of the ram as cited in claim. Binley ('722) further teaches that the process can be operated at ambient to freezing temperature (See column 2, lines 29-31). Binley ('722) further teaches that insert (3) having **an injection rod (9) is received within the axial bore (8) of the cooling ram (2)** (See col.3 lines 30-42), wherein end of rod (9) is configured to move within the axial bore (See figures 1-2), thus rod (9) would be used as **a displacement ram** as claimed.

9. Binley ('722) further teaches that the ram is associated with cooling device in order to hold the temperature from room temperature to below freezing temperature as discussed above, but fails to teach or suggest that the cooling ram is a water cooled ram as claimed.

10. Vos ('672) discloses an invention which comprises a cone-shaped mold as male shaping member having an internal space, wherein **internal space of the die including passageways (34) is involved to supply cooling fluid, such as water from the source of ice-water bucket or other** (See abstract).

11. Vos ('672) is in the same art as Binley ('722) of forming chocolate products using molds. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the cooling male die or ram of **Binley ('722)** by providing cooling passage within the internal of the die, wherein passages communicating with cooling water, and, thus the male die is interiorly cooled (See abstract) as taught by **Vos ('672)**, since Vos ('672) teaches that the use of such ice-water cooling is effective to solidify a chocolate product. The combination of Binley ('722) and Vos ('672) have established nothing more than predictable result of solidifying the chocolate using the cooling means of Vos. *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007).

12. Claim 25 of the instant application cites structural limitations with the intended uses as further limitations of the subject matter, such as, **"the displacement ram ...to contact the at least partially formed outer shell of consumable material to expel air inclusions therefrom when the water-cooled ram is in the second position"**. As we know that if prior arts disclose all claimed structural limitations as discussed above, so the structural limitations of the arts are capable to operate in desired functions as required. Intended use has been continuously held not to be germane to determining the patentability of the apparatus, *In re Finsterwalder*, 168 USPQ 530. The manner or method in which a machine is to be utilized is not germane to the issue of patentability of the machine itself, *In re Casey*, 152 USPQ 235, 238. Purpose to which apparatus is to be put and expression relating apparatus to contents thereof during the intended operation are not significant in determining patentability of an apparatus claim, *Ex parte Thibault*, 164 USPQ 666. A recitation with respect to the manner in which a claimed apparatus is

intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations, *Ex parte Masham*, 2 USPQ2d 1647.

13. **Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boyhan (WO 97/49296) in view of Boyhan (US 5,558,895) and further in view of Cartwright et al. (US 6,537,483).**

14. **Boyhan ('296)** discloses a molding apparatus for making a shell molded article, wherein invention comprises **a molding cavity (14) of the mould; a former plate (320) as ram** is configured to selectively move into and out of the mold (See figures 6-7), wherein such position of the ram is counted as first and second position of the ram as cited in claim. For examination purpose examiner is considering the open and closed positions of the mold as first and second position of the ram as cited in claim. It further teaches that the ram (20,320) comprises **an internal space**, which is surrounded by **a flexible forming member (18,318)** (See figures 1-8), wherein the flexible forming means may have positive fluid pressure provided thereto during the moulding process to assist in retaining the desired shape of the flexible forming member (See page 10 lines 11-18). It further teaches that the mould cavity (14) is provided with a moulding surface (16); and the liquid moulding material (22) provided in the bottom of the mould cavity (See page 6 lines 10-24). It further teaches that the invention may be employed with thermo-setting moulding material or any other liquid moulding material which solidifies as a result (See page 10 lines 19-21), but, fails to teach or suggest that the moulding material is a consumable material.

15. Furthermore, **Boyhan ('296)** incorporated a **Boyhan (US 5,558, 895)** in the disclosure (See page 1 lines 18-20), and teaches that the apparatus is for the same purpose of forming shell products. **Boyhan ('895)** clearly describes that the invention is involved to produce a shell molded article, wherein invention comprises mold cavity of an open mold; a deformable forming member and a liquid material disposed in the mold cavity,

wherein the liquid material is confectionery, such as molten chocolate (14) (See col.3 lines 59-60; col.4 lines 48-50). So it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of **Boyhan ('296) by providing consumable material (such as molten chocolate) as liquid moulding material within the mould cavity of the open mold** as taught by **Boyhan ('895)**.

16. **Boyhan ('296)** further teaches that the invention is particularly suitable for molding liquid material which solidify upon cooling to ambient temperature, the apparatus may be equally employed where additional **heating or cooling means are provided in or to the mould, in connection with the forming means (18)** or otherwise, and also the flexible forming means may have positive fluid pressure provided thereto during the moulding process to assist in retaining the desired shape of the flexible forming member (See page 10 lines 11-18), thus, such statement indicates that the internal space of the ram (or internal space of the flexible forming member) enable to have cooling means, but fails to teach or suggest cooling water as cited in claim.

17. **Cartwright et al. ('483)** discloses an invention which comprises mold (110) having a moulding cavity which received thermoplastic material (112); and flexible and impermeable bag material (114) is placed over the material (112), wherein the bag material (114) comprises an internal space (126) is occupied with a fluid via lines (130,132) wherein the movement of the fluid is involved to improve heat transfer, to apply the pressure toward the flexible member (114) (See col.4 lines 31-38), wherein the fluid is water (See col.4 lines 57-58), wherein the fluid with fluid controller may also include a coil or temperature controller which either is cooled or heated according to the desired process (See col.5 lines 25-40), thus, the invention of Cartwright et al. comprises an internal space of flexible member which is filled with cooling water.

18. Boyhan ('296) and Cartwright ('483) both are in the art of molds using flexible forming members with cooling means. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the internal space of the

flexible forming member of **Boyhan ('296)** by providing cooling water as coolant as taught by **Cartwright et al. ('483)** because such configuration enable to exhibit the ram of prior art with heat transfer property which could be used in varied applications, such as pressure and cooling application, in order to solidify and mold the material in excellent appearance and quality. The substitution of one known element for another yields predictable results to one of ordinary skill in the art. In this case, the use of cooling water within internal space of flexible member as taught by secondary arts, instead of coolant within the internal space of flexible forming member of primary art would provide predictable results of cooling water for quickly solidifying the molding material within the cavity, see *In re Fout*, 675 F.2d 297, 213 USPQ 532 (CCPA 1982); *In re O'Farrell*, 853 F.2d 894, 7 USPQ2d 1673 (fed. Cir.1988); *Ruiz v. Chance Co.*, 357 F.3d 1270, 69 USPQ2d1686 (Fed. Cir. 2004).

19. Claim 27 of the instant application cites structural limitations with the intended uses as further limitations of the subject matter, such as, **"...the cooling water under pressure communicates with the internal space of the water-cooled ram to expand the flexible sheath within the mold for displacing an amount of consumable material when the water-cooled ram is in the second position"**. As we know that if prior arts disclose all claimed structural limitations as discussed above, so the structural limitations of the arts are capable to operate in desired functions as required. Intended use has been continuously held not to be germane to determining the patentability of the apparatus, *In re Finsterwalder*, 168 USPQ 530. The manner or method in which a machine is to be utilized is not germane to the issue of patentability of the machine itself, *In re Casey*, 152 USPQ 235, 238. Purpose to which apparatus is to be put and expression relating apparatus to contents thereof during the intended operation are not significant in determining patentability of an apparatus claim, *Ex parte Thibault*, 164 USPQ 666. A recitation with respect to the manner in which a claimed apparatus is intended to be

employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations, *Ex parte Masham*, 2 USPQ2d 1647.

20. **Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US 3,642,415) in view of Cartwright et al. (US 6,537,483).**

21. **Johnson ('415)** discloses **a plunger diaphragm device** comprises **a mold (13)**; a reciprocable press headplate operated by ram or plunger rod (12), wherein plate (11) is secured **a forming ram (14)** of a size to enter into the container with predetermined clearance on the sides (See col.2 lines 40-47), wherein ram comprises a hollow internal space and **a shell of rigid material (14,21)** surrounding the internal space (See figure 1), wherein the shell (21) is provided with **a passage** which communicate with the internal space with the mold when the ram (14) is located in the mold (See figures 1-3), wherein **the passage is covered by a diaphragm (20)** (See figure 1). It further teaches that the ram (14) is selectively moveable into positions such as into and out of the mold (See figures 1-3). For examination purpose examiner is considering the open and closed positions of the mold as first and second position of the ram as cited in claim. It further teaches that the apparatus comprises **a fluid conduit (23) in communication with the internal space of the ram**, wherein the fluid conduit is involved to supply pressure fluid (See figure 1; col.2 lines 64-67), thus such statement suggests that the source of fluid under pressure communicates with the internal space of ram for expanding the diaphragm into the mold. It further teaches that the invention is applicable to suitable thermoplastic material such as, polypropylene, polyethylene, **polystyrene**, cellulose acetate, cellulose butyrate, cellulose nitrate, ABS etc., which can be porous open-cell or closed cell foamed material or even perforated blanks (See col.5 lines 13-25), wherein such statement inherently indicates that the moldable material as listed above would be used as consumable material, in order to make consumable product, such as a Styrofoam or cellulose cup or container (See col.6 lines 18-25 of reference (**US 5,783,126**)) which is capable of being consumed or disposed after use.



22. **Johnson ('415)** further teaches that the invention is capable to control the temperature of the material and article while being formed and for this purpose various heating and **cooling means** may be desirable for the apparatus and **fluids** used and that such are routine in the art (See col.5 lines 45-47), but fails to teach or suggest that the supply source supplying cooling water as fluid under pressure as cited in claim.

23. **Cartwright et al. ('483)** discloses an invention which comprises mold (110) having a moulding cavity which received thermoplastic material (112); and flexible and impermeable bag material (114) is placed over the material (112), wherein the bag material (114) comprises an internal space (126) is occupied with a fluid via lines (130,132) wherein the movement of the fluid is involved to improve heat transfer, to apply the pressure toward the flexible member (114) (See col.4 lines 31-38), wherein the fluid is water (See col.4 lines 57-58), wherein the fluid with fluid controller may also include a coil or temperature controller which either is cooled or heated according to the desired process (See col.5 lines 25-40), thus, the invention of Cartwright et al. comprises an internal space of flexible member which is filled with cooling water.

24. Johnson ('415) and Cartwright ('483) both are in the art of molds using flexible forming means. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify internal space of the plunger of **Johnson ('415)** by communicating with cooling water as taught by **Cartwright et al. ('483)** because such alignment is capable to inflate the diaphragm of primary art in desire configuration quickly, and, thus, enable to compress the molded material within the mold, in order to manufacture the product in desired feature and configuration such as smoothness surface of the finished article and contributes to its appearance and marketability. The substitution of one known element for another yields predictable results to one of ordinary skill in the art. In this case, the use of cooling water within internal space of flexible member as taught by Cartwright, would provide predictable results of cooling the mold, wherein such alignment inflates the diaphragm very quickly in desired pattern, and

thus enable to solidify the molding material within the cavity with excellent appearance and quality, see *In re Fout*, 675 F.2d 297, 213 USPQ 532 (CCPA 1982); *In re O'Farrell*, 853 F.2d 894, 7 USPQ2d 1673 (fed. Cir.1988); *Ruiz v. Chance Co.*, 357 F.3d 1270, 69 USPQ2d1686 (Fed. Cir. 2004).

### ***Response to Arguments***

25. **For rejection of claims 25-28 under 35 USC 112, first paragraph**, wherein Applicant argues that the paragraph [0028] as well as figures 1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 5.1, 5.2, 6.1, 6.2, 7.1 and 7.2, all of the foregoing support the claimed subject matter.

26. Applicant's arguments are fully considered and found persuasive, therefore, rejection of claims under 35 USC 112, first paragraph has been withdrawn.

27. **For rejection of claim 25 over Binley (US 5,409,722)**, wherein Applicant argues that discloses the passage (10) in injection rod (9) is meant to inject a chocolate stream into the mold, and the examiner's interpretation of the references in rejecting claim 25 are without merit.

28. **In response** to Applicant's argument, **Binley ('722)** discloses an invention related to manufacture consumable product, such as chocolate, particularly in shell form, wherein invention comprises two separable mould surfaces, which defines a closed cavity as a mould containing consumable product, such as solid fat containing product, especially **chocolate product** (See col.2 lines 1-5). It further teaches that the invention comprises **a ram (2)** which is held **at temperatures from ambient to below freezing** in **associated with cooling device** (See column 2, lines 27-31 and examples 1-2). It further teaches that the cooling ram (2) having **an axial bore (8)** (See figure 1). It further teaches that the ram (2) is configured to selectively move into and out of the mold in order to form shell of the consumable product (See figures 1-2). For examination purpose examiner is considering the open and closed positions of the mold as first and second position of the ram as cited in claim. Binely ('722) further teaches that the process can be operated at ambient to freezing temperature (See examples). Binley ('722) further teaches

that insert (3) having **an injection rod (9) is received within the axial bore (8) of the cooling ram (2)** (See col.3 lines 30-42), wherein end of rod (9) is configured to move within the axial bore (See figures 1-2), thus rod (9) would be used as **a displacement ram** as claimed. Furthermore, Applicant's arguments, such as, "the passage (10) in injection rod (9) is meant to inject a chocolate stream into the mold", which is counted as intended use of the structural element of the prior art, and, Applicant did not specifically point out that how the displacement ram of the prior art is distinguished over the claimed displacement ram as cited in the claim of the instant application. Thus, Applicant's arguments are fully considered but not found persuasive, therefore, rejection of claim 25 under 35 USC 103(a) has been maintained.

29. **For rejection of claim 26 under 35 USC 102 as being anticipated by Czetli (US 3,587,132)**, wherein Applicant argues that examiner then goes on for thirty-five lines to explain how this reference is being read on independent claim 26, which speaks for itself that the Examiner's rejection is without merit.

30. **In response to** Applicant's arguments, Applicant represents remarks with a general allegation that the claim defines a patentable invention without specifically pointing out how the language of the claim patentably distinguishes claimed limitations from the reference, therefore, Applicant advised to discuss the reference applied against the claim, explaining how the claim avoids the reference or distinguish from the claimed invention. In this situation, **Czetli ('132)** discloses a molding apparatus for forming an article, wherein invention has wide application in the field of forming articles out of material subjected successively to different temperatures (See col.1 lines 10-12). The reference teaches the formation of cups from **foamed polystyrene** (See col.1 lines 14-16), such foamed polystyrene (or Styrofoam) is well known consumable material, since it is generally used and disposed. It further teaches that the invention comprises **a female mold (22)** having a molding cavity (18) for receiving molding material; **a male mold (28)** as a ram is associated with drive means (8) is involved to move male mold(28) in

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selective position such as into and out of the mold (26) (See figure 2), wherein male mold comprises a **passage (47)** is associated with cooling water chamber (43) for supplying water within the internal space of the male mold (See figure 9; col.5 lines 25-28), thus, such configuration of the male die would **define a water cooled ram** as cited in claim; and further comprises **axial bore (46) for receiving tube (33)**, wherein tube having one end as **duct (34) communicate with the cavity** (See col.4 lines 33-35; figure 9), and other end as **supply source** (not labeled) (See figure 9), wherein tube is involved to flow the steam into the cavity (See col.5 lines 18-22). For examination purpose the examiner is considering the open and closed positions of the mold as first and second position of the ram as cited in claim. It further teaches that after predetermined time the steam admitted through the tube is shut off (See col.5 lines 23-24), wherein such statement indicates that the tube (33) is associated with any suitable source by valve for shutting off and opening communication of steam.

**Pertinent art**

31. **Epel (US 4,873,044)** discloses a molding apparatus comprises deflatable member (18) is positioned flush with the surface (14) of a mold, wherein the deflatable member is inflated by using fluid prior to harden the liquid moulding material (See abstract; figures 2-3), wherein such statement indicates that the fluid might be cooling fluid, in order to harden the liquid material, wherein the liquid moulding material is thermosetting resin (See col.1 lines 48-49). It further teaches that the deflatable member (18) having at least one fluid chamber (20) containing fluid (22) defined in the interior thereof, wherein the invention further comprises fluid movement means (28) including pump (30) and reservoir (31) for adding or removing fluid to and from the deflatable member (18).

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIMPLE N. BODAWALA whose telephone number is

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(571)272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PHILLIP C. TUCKER can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/D. N. B./

Examiner, Art Unit 1791

/Philip C Tucker/

Supervisory Patent Examiner, Art Unit 1791